CONTRACT NO. 76979 TOTAL SHEET SHEETS NO. COUNTY SECTION 255 35 11 STA. TO STA. FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

n DIST 8 ITS 2007-1, 2A

. . MADISON & ST CLAIR COUNTIES

230 (9) Minimum anchor rod 150 (6) projection above top of

125 (5) Dia. PVC duct wireway 25 (1)

min. projection above foundation.

#4 bare copper grounding electrode conductor

foundation, increase as needed.

Top of foundation to be formed to 450 (18) below ground surface. After forms are removed, compact, impervious material a minimum of 450 wide x 450 deep (18W x 18D) around fdn.

 $16mm \times 3m (5/8" \times 10")$ Two (min.) connected (threaded) sectional grounding electrodes, more as needed, to achieve proper grounding per Sec. 806

Bottom steel anchor bolt template. Method of attachment as approved by the Engineer, see detail.

V-bars see. Sec. B-B and Table

-3 hoops min. top & bottom

125 (5) conc cover (See Note)

See desian

table

Indication in the second secon	Residence of the state of the s	150 W x 6(min) T (6 x 1/4) steel ring plate hex head nut (typ) block washer (typ) c flat washer (typ)
		ANCHOR ROD CAGE TOP -50 x 13 (2 x 1/2) steel bar

ANCHOR ROD CAGE

ORCEME	4T			
(SH)				SOIL
DRILLED	V Bar			201F
SHAFT	* 11			SOFT
DIAM.	NUMBER	·	0	MEDIU
(în)	(each)		SS	STIFF
48	14		Cohesive	VERY
48	14		ŭ	HARD
48	14			
48	14			VERY
54	18		١,	L.OOSE
54	18		Granular	MEDIU
54	18		g	DENSE
60	21		P	VERY
60	21		L	

ANCHOR ROD & SHAFT REINFORCEMENT

DESIGN TABLE (ENGLISH)

BASE

(MIN)

21

21

26

28

28

30

32

TOWER ANCHOR ROD TOWER

DIAM. (MIN)

30

30

30

30

36

36

36

38

38

ANCHOR ROD CAGE BOTTOM

ROD CIRCLE

DIAM.

(MIN)

(in)

1.5

1.5

1.5

1.5

1.75

1.75

1.75

2.25

160 2.25

HEIGHT

(f+)

80

90

100

110

120

130

140

150

	SOIL CONSISTENCY	AVERAGE STRENGTH	LIGHT TOWER HEIGHT (feet)								
		(Qu in tsf)	80	90	100	110	120	130	140	150	160
	SOFT	< 0.5	20.4	21.5	22.5	23.6	25,0	26.1	27.2	28.5	29.8
0	MEDIUM	0.5 to 1	16.8	17.5	18.3	19.0	20.3	21.1	21.8	23.1	24.0
e Si	STIFF	1 to 2	14.3	14.8	15.4	15.9	17.1	17.6	18.1	19.3	19.9
ohe	VERY STIFF	2 to 4	12.6	13.0	13.3	13.7	14.8	15.2	15.6	16.7	17.1
Ö	HARD	> 4	11.4	11.6	11.9	12.2	13.2	13.5	13.8	14.9	15.2
		(N in BLOWS/FT.)									
	VERY LOOSE	< 5	16,4	17.1	17.8	18.5	18.9	19.6	20.2	20.7	21.4
L.	L00SE	5 to 10	15.0	15.6	16.2	16.8	17.3	17.9	18.4	18.9	19.5
nular	MEDIUM	10 to 25	14.3	14.9	15.5	16.0	16.4	17.0	17.5	17.9	18.5
à	DENSE	25 to 50	13.6	14.1	14.6	15.1	15.5	16.1	16.5	16.9	17.5
Ğ	VERY DENSE	> 50	12.9	13.4	13.9	14.4	14.8	15.3	15.7	16.1	16.6

SHAFT LENGTH DESIGN TABLE (ENGLISH) (LENGTH IN FEET)

GENERAL NOTES

- 1) The shaft length(s) provided in the foundation schedule are based on the soil borings included in the plans. If different soils are encountered, the engineer shall be notified to provide a revised length.
- 2) Use 8 rods min., see design table for minimum anchor rod diameter. Anchor rod quantity, diameter, and length shall be determined by the approved drawings furnished by pole manufacturer.
- 3) All foundation reinforcement steel to be epoxy coated. Use #11 vertical bars and #4 spiral reinforcement - see design table.
- 4) The cost of reinforcing is incidental to the foundation.
- 5) Steel anchor bolt forms shall not be removed for a minimum of 3 days after concrete is poured and the tower shall not be set for a minimum of 7 days or as approved by the Engineer.
- 6) Coordinate bolt circle diameter of the tower with the bolt circle diameter of the anchor bolt cage.
- 7) Foundation shall be in accordance with applicable portions of Section 516 and 837 of the Standard Specifications.
- 8) Foundation shall be poured monolithically with no construction joints allowed.
- 9) Place grounding electrodes in an access well, if there is a conflict in using the wireway window.
- 10) Diameters listed in the tables are based upon a 125 (5") concrete cover. The minimum cover is 75 (3") in a dry shaft excavation or 100 (4") in a wet hole. When rock is encountered, a 125 (5") cover is required against soil to allow a 50 (2") cover against rock

All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS	+ 1	ILLINOIS DEPARTMENT OF TRANSPORTATION
	Corrected 4/12/06		LIGHT TOWER FOUNDATION
			FAI 255 SECTION DIST 8 ITS 2007-1, 2A MADISON & ST. CLAIR COUNTIES

DATE NAME SCALE TENCE

Top ring template for

removable form).

length

FOUNDATION SCHEDULE

STATION

TOWER

NUMBER

EP OFFSET

LENGTI (FT.)

1m ×1m ×150

(center with handhole door

(3′×3′×6′′)

Concrete

work pad

anchor rods. Attachment

as approved by Engineer,

see detail (may be part of

25 (1) Chamfer

#4 spiral

@ 150 (6) pitch (typ)

125 (5)

Shaft diam.

See design

table

FOUNDATION

ELEVATION

#11 V bars evenly spaced

SECTION A-A

rods evenly

spaced